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Macroeconomic research in low-income countries: a conversation with Christopher Adam

In recent years, macroeconomic research on low-income countries has shifted from its previously narrow focus on inflation and exchange rate stabilisation towards a much greater concern on how macroeconomic policy should be set to support long-term growth. The International Growth Centre is at the forefront of academic research in macroeconomics that directly responds to policy-makers needs in our partner countries in Africa and South Asia. Christopher Adam, Professor of Development Economics at University of Oxford, shares with us some insights from his ongoing work in Tanzania and low-income economies, more broadly.

Professor Adam, what are some of the most effective ways that a country can raise its national savings rate to fund public investment?

This is a question of first order importance, but one that doesn't have a straightforward answer. At a rather basic level we know that rising incomes are generally believed to be the most important determinant of savings and savings mobilisation: the more household incomes exceed subsistence; the higher the savings rate. But this is only part of the story: in my view, an important determinant of higher savings will be how rising incomes interact with public policy choices. There are three main areas I would focus on: macroeconomic stability, financial sector development, and the complementarity between foreign and domestic savings.

- First, it is well known that macroeconomic stability is not a sufficient condition for enhancing private sector savings, but it is certainly necessary. Macroeconomic instability just signs the death warrant of sustained private sector savings.[1]
- Second, the mobilisation and allocation of savings is a principal function of the financial sector. Across many of the countries in which the IGC is working, financial sectors are relatively small, markets are thin, and the realised real returns to savings are often rather low, partly because of macroeconomic instability, and partly due to structural issues like imperfect competition and monopoly power in the financial sector etc. A precondition for higher aggregate savings is reforms that lead to the development of the financial sector, enhanced access to finance and the deepening of markets. We have already seen important developments in this regard. For example, the growth of mobile money in sub-Saharan Africa has been shown to contribute in

improving access to the formal financial system and mobilisation of savings.[2] In Tanzania we are currently working on research to enhance our understanding of the micro-structures of the financial sector, leading into other upcoming work that will look into issues around lengthening the maturity structure of government debt, for example. These would broaden the menu of savings not only for financial institutions, but also for households and other private savers.

- Third, it is important to understand the extent to which foreign savings complement domestic savings in financing investment. External financing, including official flows, i.e. aid, foreign direct investment and debt financing, are becoming a focal area for our research agenda in Tanzania. There is currently a lot of enthusiasm around raising external finance, which brings about a number of serious concerns related to the viability of external finance and how it might lead to inefficiencies.

Moving on to an even bigger question, what does your research tell us about the relationship between fiscal policy and growth?

David Bevan and I have recently been working on a macroeconomic model that explores the implications for public infrastructure investment in environments where the recurrent cost associated with the operations of government are high, when taxation is distortionary and returns from public investment may not be fully appropriable.[3] Our work is primarily concerned with the complementarity between public investment and private capital, and growth. The issue that most interests us in this paper is how inefficiencies in public finance, on the tax side and in how expenditure decisions are made, compromise the crowding-in of private capital by public investment. In an environment where you have a tax system that is not particularly distortionary, the public capital stock is well maintained and there is sufficient recurrent costs incurred to operate the capital stock, public investment can be highly leveraged and can generate favourable growth effects of public investment. We are more interested, however, in cases when these potential gains are compromised by distortionary tax systems and the political economy of public expenditure. Due to the former, the private return to investment is lowered by taxes as resources are inefficiently allocated, while in the latter poor operations and maintenance expenditure undercuts the quantity and quality of public capital at the disposal of the economy. We try to analyse how seriously these public finance problems impinge on the public investment process itself, and more importantly the effect of public investment in promoting private sector investment and growth. The key policy implications are to emphasise the importance of fiscal reform in particular. And that's both a longer term process involving reform in the tax system towards structures that are less distortionary and more conducive to growing private sector income, and a shorter-term agenda focused on addressing inefficiencies in operations and maintenance. This has been a concern for the last thirty to forty years especially in sub-Saharan Africa: insufficient operations in maintenance have plagued public investment. Partly because there are no funds in operations and maintenance, keeping the capital stock in good shape for the next generation is a low priority. When there's a need to decrease budget deficits, the easiest funds to cut back on are funds for the maintenance of

easiest funds to cut back on are funds for the maintenance of the capital stock, mainly infrastructure maintenance. What we see too often are cycles of rapid depreciation and reconstruction. It's no accident that if you look at the history of World Bank lending to sub-Saharan Africa, a huge proportion of the projects are called "roads rehabilitation" or "education rehabilitation" projects. That is a very costly way of running the public capital stock and it seriously harms the productivity of private capital. Our work is quite abstract at the moment but we hope to take it more specific country applications, especially a specific application to Tanzania at the present, and possibly to Uganda in the future.

What other exciting topics for research in terms of promoting development are there in Tanzania?

I suppose the biggest development there at the moment is natural resource discovery. In the last four to five years substantial natural gas reserves have been discovered in the Indian Ocean off of Tanzania. As we know from the experience of other countries, turning natural resource discoveries into a radical transformation of the economy comes with risks. For Tanzania in particular, the current challenge is that the cost of extracting natural gas is extremely high, and key decisions have not yet been taken by major international oil and gas companies. Investment is in the order of USD 20-30 billion and the returns to those investments will probably take 7-10 years to materialise. Domestically, however, expectations are already getting ahead of reality so that managing these long before the gas actually starts to flow has become very rapidly a first order public policy challenge. Rather naturally, one of the major cross-cutting themes in the IGC Tanzania Programme is managing the prospect of a natural gas boom. Some of the very concrete elements related to that include:

- Thinking about fiscal policy, tax reform, how new sources of revenue will shape the overall design of the tax system;
- The composition and quality of public investment;
- Macroeconomic management of potential Dutch disease effects. In particular, understanding the extent to which appreciation of the currency undercuts the competitiveness of the non-gas sectors of the economy.
- Issues about local content – the extent to which domestic firms are integrated in the construction and operational phases of the natural gas boom. This is a project we have running with Prof John Sutton of LSE. Some of the questions we are addressing in this work are: how best do countries like Tanzania insert local companies into global supply chain? What do we know from best practice and how make that fit into the Tanzanian reality?
- Issues related to government 'over-borrowing' in advance of future revenues. At the moment there is an almost feeding frenzy by potential international investors who on the expectation of future earnings are seeking to lend now. This brings us back to the public investment and financing sets of questions that we started this discussion with. What is the appropriate level of external borrowing on increasingly non-concessional terms for countries that are anticipating (with a fair degree of uncertainty) some sort of natural resource windfall?

- Issues related to the economic geography and political economy of natural gas exploration. The natural gas sector is not intrinsically labour-intensive, and the political economy of natural resource management is often at odds with the political economy needed to support labour-intensive sectors in the manufacturing and service sectors. In Tanzania we observe a tension between the traditional ‘old economic geography’ view of the growth and development process, where the political economy is about managing point resources, securing and distributing rents, and a ‘new geography’ political economy where the priorities are related to the provision of public infrastructure, provision of training, making Tanzania a competitive coastal economy – one that is both providing access for the rest of the world to the regional market of East Africa, but is also a platform for exporting to the rest of the world. Resolving this tension is a very profound political economy problem.

To summarise, many of the IGC Tanzania projects explore issues related to economic geography, urbanisation, industrial policy, in particular skills development, and issues related to the role of the port of Dar es Salaam as an important access point to the region. We’re engaging with policy-makers so that our portfolio of projects feeds into decisions about structural transformation, urbanisation, rural-urban migration, the spatial dimension of economic development, against a background where natural resource dependency may become an important characteristic of the development trajectory of the country. The IGC is not the only organisation involved, obviously, but the IGC programme is quite compactly inserted in a number of important areas in which we aim to make meaningful contributions.

[1] For example, see Sirimaneetham, V. and Temple, J. 2009. Macroeconomic Stability and the Distribution of Growth Rates. *The World Bank Economic Review*. 23(3): 443-479. The authors show that instability forms a binding constraint to growth for the less economically stable group.

[2] For example, see Jack, W. and Suri, T. Forthcoming. Risk Sharing and Transaction Costs: Evidence from Kenya’s Mobile Money Revolution. *American Economic Review*. Using data on the M-PESA system in Kenya, the authors show that while shocks reduce per capita consumption by 7 percent for non-user households, the consumption of households with access to mobile money is unaffected.

[3] For a discussion of the model, please refer to the presentation during IGC’s Africa Growth Forum in Kampala, Uganda, 2013. The model builds on Buffie, E., Berg, A., Pattillo, C., Portillo, R. and Zanna, L. 2012. *International Monetary Fund*. WP/12/144